

B²
Sub C¹
1. (Amended) A method for detecting nucleic acid fragment and/or PNA having a mutation, [which comprises] comprising the steps of:

- (A) [a step of] hybridizing at least one fragment among one or more fragments fixed on a substrate, which fragments are selected from the group consisting of one or more nucleic acid fragments and one or more PNA fragments and have a part or all of a sequence of full-length gene, with at least one fragment [of which] having a mutation [is] to be assayed, [which] wherein said fragment is selected from the group consisting of one or more nucleic acid fragments and one or more PNA fragments;
- (B) [a step of] binding a labeled substance, [which is a] said substance specifically binding to a mismatched base pair occurring between the hybridized fragments having a mutation; and
- (c) [a step of] identifying a fragment bound by the labeled substance by detecting the label; thereby detecting a nucleic acid and/or PNA fragments having a mutation.

B³ Sub F²
6. (Twice Amended) The method of claim 1, wherein [identification and quantification of the fragment having a mismatched base pair are performed by] introducing a label into a nucleic acid and/or PNA fragment to be assayed for mutations, and detecting the label of the nucleic acid and/or PNA fragment to be assayed for mutations, are carried out in order to identify and quantify the fragment having a mismatched base pair.

B⁴ Sub G¹
8. (Twice Amended) The method of claim 6, wherein the nucleic acid and/or PNA to be assayed for mutations is labeled with at least one kind of [substance] label selected from the group consisting of luminescent substances, fluorescent substances, phosphorescent substances, stable isotopes, radioactive substances, antibodies, antigens, enzymes and proteins.

9. A method for detecting a nucleic acid fragment and/or PNA fragment having a mutation, [which comprises] comprising the steps of:

- (A) [a step of] hybridizing at least one fragment among one or more fragments fixed on a substrate, which fragments are selected from the group consisting of one or more nucleic acid fragments and one or more PNA fragments and have all or part of a sequence of full-length gene, with at least one fragment of which mutation is to be assayed, [which] wherein said fragment is selected from the group consisting of one or more nucleic acid fragments and one or more PNA fragments;
- (D) [a step of] treating a mismatched base pair occurring between the hybridized fragments with a substance specifically recognizing and cleaving the mismatched base pair to cut the hybridized fragments at the mismatched base pair, or to remove at least a part of one strand of the fragments hybridized from the mismatched base pair;
- (E) [a step of] labeling a fragment remained on the substrate after the cleavage or removal; and
- (F) [a step of] identifying the labeled fragment by detecting the label; thereby detecting a nucleic acid and/or PNA fragment having a mutation.

10. (Amended) The method of claim 9, wherein [3' ends of the fragments] said at least one fragment is fixed on the substrate at the 5' end and the 3' end of said fragment is [are] blocked, and the labeling of the fragment in step (E) is performed by 3' end addition reaction.

13. (Twice Amended) The method of claim 9, wherein the labeling of the fragment in the step (E) is performed by an enzyme reaction utilizing a [labeled substrate] label.

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15. (Twice Amended) The method of claim 13, wherein the [substrate] fragment is labeled with at least one kind of [substance] label selected from the group consisting of luminescent substances, fluorescent substances, phosphorescent substances, stable isotopes, radioactive substances, antibodies, antigens, enzymes and proteins.

16. (Twice Amended) The method of claim 9, wherein introducing a label into a nucleic acid and/or PNA fragment to be assayed for mutations, and detecting the label of the nucleic acid and/or PNA fragment to be assayed for mutations , are carried out in order to detect and quantify the fragment having a mismatched base pair.

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18. (Twice Amended) The method of claim 16, wherein the nucleic acid and/or PNA to be assayed for mutations is labeled with at least one kind of [substance] label selected from the group consisting of luminescent substances, fluorescent substances, phosphorescent substances, stable isotopes, radioactive substances, antibodies, antigens, enzymes and proteins.

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21. (Twice Amended) The method of claim 1, wherein said [the fragments of] nucleic acid or PNA [fixed on the substrate are fragments having a] is cDNA [sequence].

22. (Twice Amended) The method of claim [1] 9, wherein [the fragments of] said nucleic acid or PNA [fixed on the substrate have a part or all of] is cDNA [sequence of full length gene].

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23. (Amended) A substance specifically bindable to a mismatched base pair [characterized in that it] wherein said substance is labeled with GFP (Green Fluorescence protein).

24. (Amended) The substance of claim 23, wherein the substance specifically bindable to the a mismatched base pair is a C/C mismatch binding protein.

25. (Amended) [The] A substance [of claim 24] specifically bindable to a mismatched base pair, wherein [the mismatch binding protein is Mut S protein or analogue thereof, or] said substance is a C/C mismatch binding protein.

27. (Twice Amended) The substance of claim [21] 25, wherein the label is at least one kind of [substance] label selected from the group consisting of luminescent proteins, phosphorescent proteins, fluorescent proteins, luminescent substances, fluorescent substances, phosphorescent substances, stable isotopes, radioactive substances, antibodies, antigens, enzymes and proteins.

28. (Amended) An article comprising a substrate having a surface on which one or more kinds of [RNA fragments] nucleic acid or PNA fragments having a part or all of the sequence of a full-length gene are fixed in a hybridizable condition.

29. (Amended) The article of claim 28, wherein [the RNA] said fragments [or PNA fragments] fixed on the substrate are bound to the substrate only at their 5' or 3' ends.

30. (Twice Amended) The article of claim 28, wherein [the RNA] said fragments [or PNA fragments] fixed on the substrate are [fixed] bound to the substrate by covalent bonds.

Please add the following new claim:

-- 31. The article of claim 28, wherein said nucleic acid or PNA is cDNA.--